CLASSIFICATION REPORT

FIRE RESISTANCE LABORATORY

Classification of the fire resistance according to EN 13501-2:2023, based on test according to EN 1364-1:20215

andaragón
www.andaragon.com

Applicant: Andaragón S.L.U.

Tested element: non-loadbearing wall

Manufacturer: Andaragón S.L.U.

Reference: "SISTEMA TABIHAUS"

AFITI IS FOUNDER MEMBER OF egolf

Date of issuance of report: 16th April 2024
Test date: 19th February 2024

FIRE RESISTANCE CLASSIFICATION ACCORDING TO EN 13501-2:2023

Applicant: **Andaragón S.L.U.**
Andaragón Polígono Las Norias, Parcela 19-A
50450 - Muel (Zaragoza)

Issuing laboratory: **AFITI-LICOF**
Notified body nr.: 1168

Building element: **Non-loadbearing wall**
Note: The information marked with this symbol (⊙) has been provided by the applicant.
⊙Manufacturer: Andaragón S.L.U.
⊙Reference: "SISTEMA TABIHAUS"

Classification report nr.: 10388/24-2 English Version
Date of issue: 16th April 2024

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1. AIM OF THE REPORT

This classification report defines the fire resistance classification assigned to non-loadbearing wall designated by the applicant as "SISTEMA TABIHAUS" according to the procedures established in the standard EN 13501-2:2023 *Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services.*"

2. DETAILS OF ELEMENT AS CLASSIFICATION OBJECT

2.1. TYPE OF FUNCTION

The element "SISTEMA TABIHAUS" is defined as "partition".

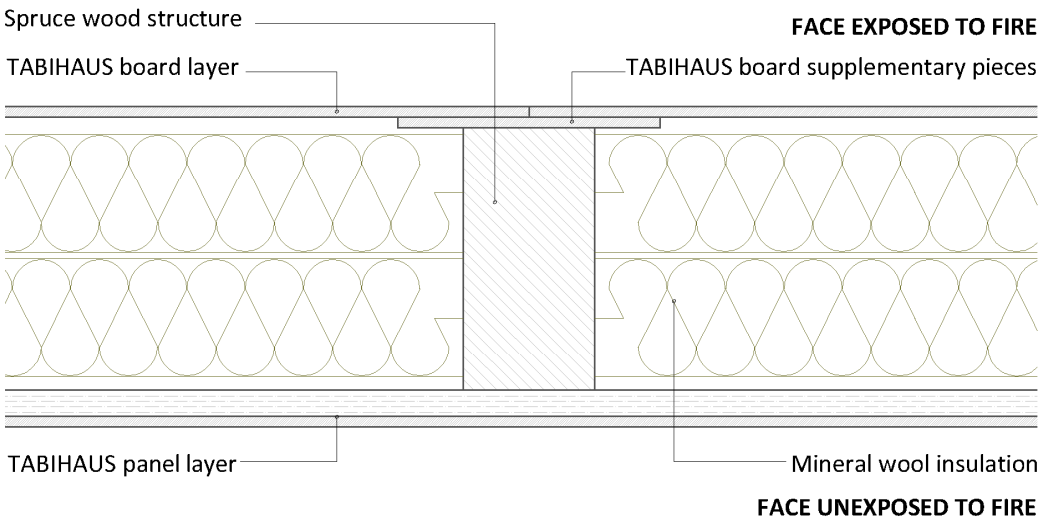
2.2. DESCRIPTION

The main descriptive characteristics of the specimen as well as its reference have been provided by the applicant (see annex of the test report). AFITI is not responsible for the information provided by the applicant.

Below it is described both the data of the specimen verified by AFITI and the data which, although it has not been possible to contrast them, are considered relevant for the description of the specimens. This information, extracted from the documentation provided by the applicant, is identified with the symbol (⊙).

- Nominal dimensions of the wall (mm): .....3.000 (height) × 2.970 (width) × 244 (thickness)
- Basic description of the assembly: .....enclosure system composed of a wooden structure with a layer of ⊙ TABIHAUS board and supplementary pieces made of the same type of plate on one side (face exposed to fire) and a panel layer of ⊙ TABIHAUS panel on the opposite side (face not exposed to fire), and mineral wool insulation.

- Figure 1 – General section of the wall
(dimensions in mm)



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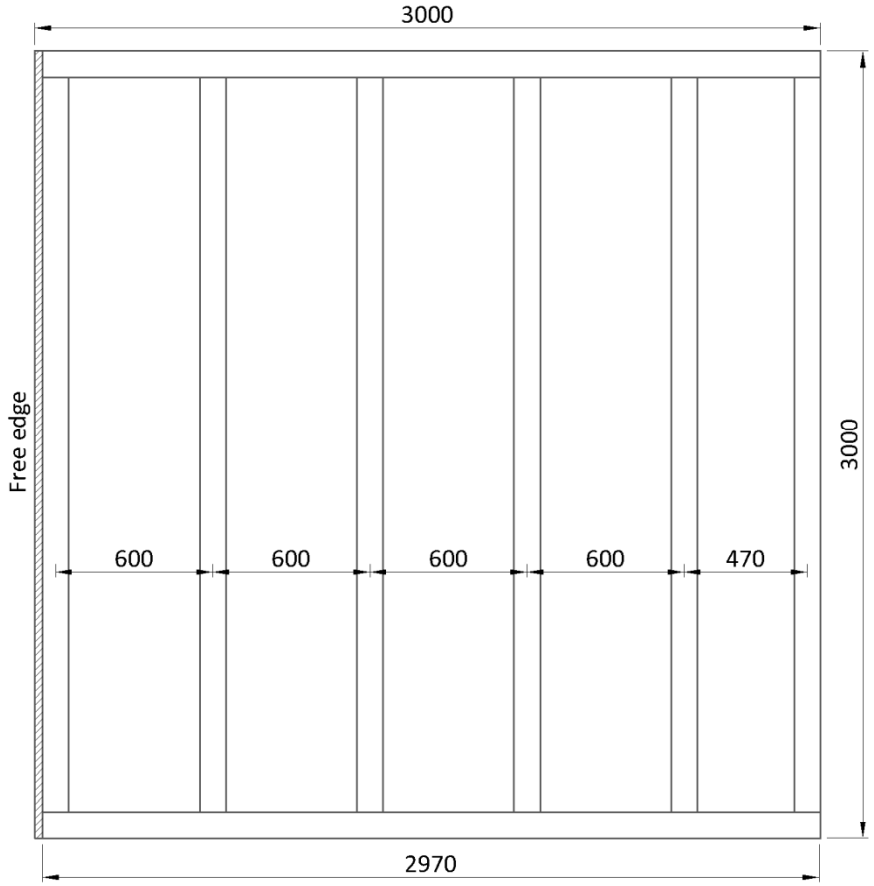
Structure

- Wooden profiles:
  - Material: .....⊙ spruce wood
  - Section (mm): .....200 x 100
  - Length (mm): 2,990
  - Disposal.....2 horizontal studs at the upper and lower edges of the specimen and 6 vertical studs
  - Distance between vertical studs (mm): 600
  - Upper gap (mm) .....between 8.0 and 10.0
  - Fixation to the test frame.....by Ø8 × 150 mm plugs: 2 on the upper edge, 850 mm from the corners, 2 on the lower edge, 250 mm from the corners, and another 2 on the vertical stud in contact with the test frame, also 250 mm from the corners
  - Fixation between studs .....vertical and horizontal studs are fixed to each other using pairs of Ø6 × 150 mm crossed screws at their encounters
  - Sealing.....perimeter studs are sealed to the test frame using ⊙ TABIHAUS fire retardant polymer putty

- Figure 2 – Structure scheme
(dimensions in mm)



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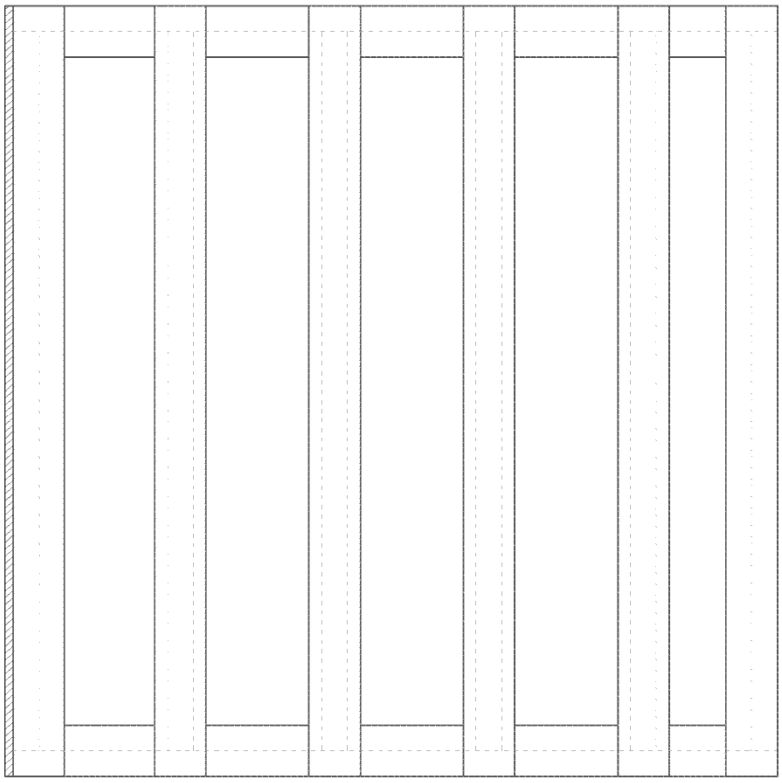
Face exposed to fire (description from the interior to the exterior)

- Supplementary pieces:
  - Location: .....fixed to the structure studs
  - Material: .....⊙ TABIHAUS board
  - Composition.....⊙ magnesium sulfate cement, plant fibers, glass fibers and EPS foam particles
  - Dimensions (mm): .....3,000 × 200 y 300 × 200
  - Board thickness (mm).....8
  - Number y distribution of pieces.....6 of 3,000 × 200 mm (one in front of every vertical stud) and 10 of 300 × 200 mm, approx. (a piece between every gap of visible horizontal stud between the 6 boards of 3,000 × 200 mm). (see figure 3)
  - Number of board layers 1
  - Fixation to studs .....by Ø3.5 × 55 mm screws, every 400 mm (3,000 × 200 mm boards) and 3 units each 300 × 200 mm piece)
  - Sealing between boards and studs .....⊙ TABIHAUS fire retardant polymer putty

- Figure 3 – Supplementary board pieces distribution
(dimensions in mm)



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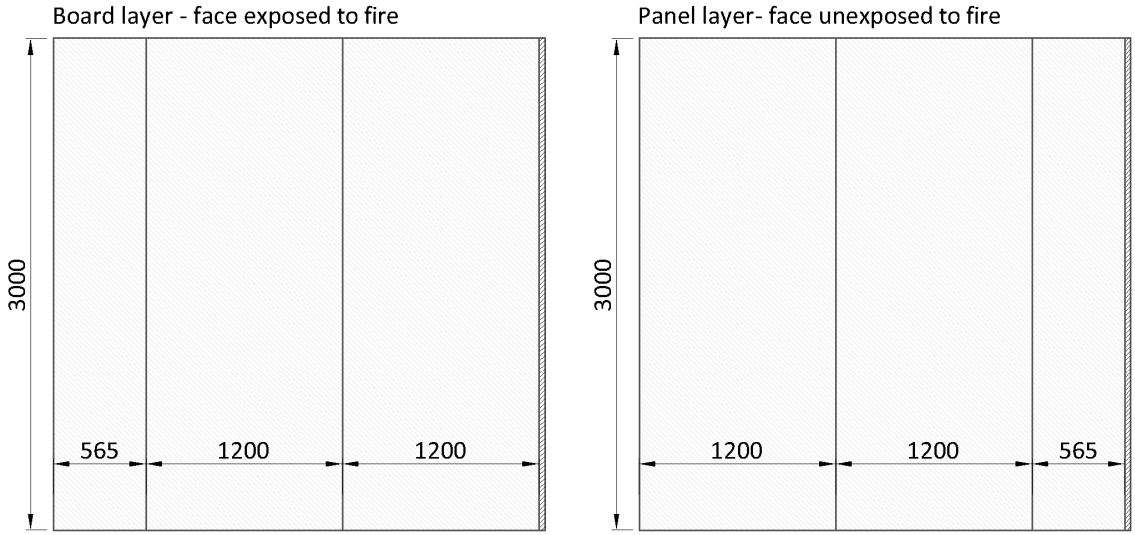
- Board layer:
  - Localization: .....fixed to the supplementary pieces and to the structure studs
  - Material: .....⊙ TABIHAUS board
  - Composition.....⊙ magnesium sulfate cement, plant fibers, glass fibers and EPS foam particles
  - Board density(*) (kg/m3) 922
  - Moisture content of the board (*) (%) 4.3
  - Dimensions (mm): .....3,000 x 1,200
  - Board thickness (mm).....8
  - Number of boards 3
  - Number of board layers 1
  - Distribution:.....see figure 4
  - Fixation to studs .....by Ø 3.5 × 55 mm screws, every 400 mm.
  - Sealing between boards .....by ⊙ TABIHAUS fire retardant polymer putty between the boards and between the boards and the supplementary pieces, and joint finishing composed of 95 mm wide fiberglass mesh and ⊙ TABIMAS putty

(*) The properties of the board have been assessed on the day of the test based on the samples of material provided by the applicant for the test.

- Figure 4 - Boards and panels distribution
(dimensions in mm)



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Face unexposed to fire

- Panel layer:
  - Material: .....⊙ TABIHAUS board and XPS industrial panel
  - Reference.....⊙ TABIHAUS panel
  - Composition:
    - Material: .....⊙ TABIHAUS board
    - Thickness (mm) 8
    - Orientation .....towards the exterior of the specimen

    - Material: .....⊙ industrial XPS
    - Thickness (mm) 20
    - Orientation .....towards the interior of the specimen

  - Dimensions (mm): .....3,000 x 1,200
  - Panel thickness (mm) 28
  - Number of panels.....3
  - Number of panel layers.....1
  - Distribution:.....see figure 4
  - Fixation to studs .....by Ø3.5 × 55 mm screws, every 400 mm.
  - Sealing between panels.....by ⊙ TABIHAUS fire retardant polymer putty between the panels, and joint finishing composed of 95 mm wide fiberglass mesh and joint paste ⊙ TABIMAS putty

Insulation

- Mineral wool (*):
  - Manufacturer: .....Knauf Insulation (marked on the product)
  - Reference:.....TP 116 (marked on the product)
  - Number of layers.....2
  - Disposal.....counterbalanced
  - Location .....embedded between the vertical studs of the structure, between the board layer exposed to fire and the panel layer unexposed to fire
  - Fixation .....installed under pressure and finally held by 4 horizontal pieces, from side to side of the specimen, separated by approximately 600 mm, composed of an "U" metal profile, with a section of 70 × 30 mm and a thickness of 0.6. mm, recessed and screwed to the supplementary pieces and to the vertical studs at their encounters using 3.5 × 55 mm screws.
  - Dimensions (mm) .....1,350 × 600
  - Thickness (mm):.....180 (90 each layer)
  - Density (kg/m^3):.....16
  - Moisture content (%): 2.6
  - Binder content (%): 6.3

(*) The properties of the mineral wool have been assessed on the day of the test based on the samples of material provided by the applicant for the test

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3. TEST REPORTS AND RESULTS IN SUPPORT OF THIS CLASSIFICATION

3.1. TEST REPORTS

Report	Test method	Issuing laboratory	Applicant
Nr.: **10388/24** Test date: 19th February 2024	EN 1364-1:2015 EN 1363-1:2020	**AFITI-LICOF** Camino del Estrechillo, 8 28500 – Arganda del Rey (Madrid - SPAIN) Organismo notificado nº: **1168**	**Andaragón S.L.U.** Andaragón Polígono Las Norias, Parcela 19-A 50450 - Muel (Zaragoza)

3.2. CONDITIONS OF EXPOSURE

⊗ Nr. of exposed sides: .....one (asymmetrical)

⊗ Heating curve: .....$T = 345 \log_{10} (8 t + 1) + 20$

where
T .... is the average furnace termperature, in degree Celsius;
t .... is the time, in minutes.

3.3. TEST RESULTS

	10388A
Integrity (E)	**120 minutes**(E)
Cotton pad	120 minutes(E)
Gap gauge ∅ 6 mm	120 minutes(E)
Gap gauge ∅ 25 mm	120 minutes(E)
Sustained flames > 10 s	120 minutes(E)
Thermal insulation (I)	**99 minutes**
Average temperature	100 minutes(E)
Maximum temperature	99 minutes

(E) End of the test without failure of this criteria.

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1. CLASSIFICATION STANDARD

This classification has been carried out in accordance with the clause 7.5.2 of the standard EN 13501-2:2023.

4.2. CLASSIFICATION

In accordance with the clause 7.5.2 of the standard EN-13501-2:2023, the product "SISTEMA TABIHAUS" is classified as partition according the following combination of performance parameters and classes:

E 120 / EI 90

The following classifications are also allowed:

E	15	20	30	45	60	90	120
EI	15	20	30	45	60	90	-
EW	15	20	30	45	60	90	-

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4.3. FIELD OF APPLICATION

According to the chapter 13 of the standard EN 1364-1:2015, the tested element has the following field of application:

The classification obtained is also valid for the following modifications of the specimen characteristics without the need for further testing.

Characteristic	**Permitted variation**	**Reference value** (1)
Wall height	Reduction without limit Increase up to 4 m provided that the expansion tolerances increase proportionally	Height: 3,000 mm Upper gap: 10 mm approx.
Wall width	Increase	Width: 3,000 mm, free edge included
Wall thickness	Increase	244 mm
Thickness of the constituent materials	Increase	Wooden structure: 200 mm Supplementary pieces: 8 mm board Panel: 8 mm board and 20 mm XPS Board: 8 mm
Distance between the centres of the fixings	Reduction	As described in chapter. 2.2
Boards dimensions	Reduction of the linear measures without reducing the thickness	Height: 3,000 mm Width: 1.200 mm Thickness: 8 mm
Panels dimensions	Reduction of the linear measures without reducing the thickness	Height: 3,000 mm Width: 1.200 mm Thickness: 28 mm (8 mm board and 20 mm XPS)
Number of horizontal joints	Horizontal joints inclusion is not allowed	Without horizontal joints
Number of vertical joints	Allowed inclusion of vertical joints same as tested	As described in chapter. 2.2
Accessories in the division	Accesories inclusión is not allowed	Without accesories
Supporting construction	The result is applicable to high density rigid supporting construction with at least the same fire resistance as the test specimen	Tested in the test frame without any supporting construction.
Exposure direction	Only valid for tested direction of exposure	Asymmetric specimen

(1) Reference values of the tested specimen from which the indicated variations are permitted.

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5.- LIMITATIONS

"This document does not represent type approval or certification of the product".

Arganda del Rey,16th April 2024

Documento Firmado Digitalmente

Signed: Sergio Nogueras Perona
Technical director
Fire resistance laboratory

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